ABSTRACT

Background:

Cranial vault is formed by frontal, occipital, pair of parietal and temporal bones. Surgical approaches to the cerebral hemisphere, both diagnostic and operative, are made through the calvaria. Study of the thickness of these bones is thus very useful for the neurosurgeons, the forensic medicine experts and the radiologists.

Objectives of the study

To study of thickness of the cranial vault and diploeic space and its correlation with age, sex, height, weight and head circumference in the paediatric age group (5 to 15 years).

Methods:

100 children referred to cranial CT with no history of head injury, were scanned in Dual Slice G.E. The measurements of skull vault and diploe were taken at predetermined places, along with other study parameters which include age, sex, height, weight and head circumference of the patients.

Results:

The thickness of frontal and occipital bone showed positive significant correlation with age, height, weight and head circumference. The thickness of parietal bone showed positive significant correlation with age, height and head circumference. The frontal diploeic thickness showed significant correlation with age, sex and weight. The occipital

diploeic thickness showed significant correlation with age and sex. The parietal diploeic thickness showed significant correlation with age, sex and height.

Conclusion:

As the age, height, weight and head circumference increases thickness of frontal and occipital bone increases. The parietal bone also increases in thickness with the increase in age, height and head circumference in 0 to 15 years age group children. The thickness of frontal diploe increases with the increase in age and weight of the individual. Thickness of occipital bone increases in relation to the age of the individual whereas the parietal diploe increases with the age and height of the individual. On comparison with regard to gender it is concluded that the males have thicker diploeic spaces than females in the children belonging to the age group between 0 to 15 years.

Key words:

Calvaria, Cranial vault, Diploeic space, Frontal bone, Parietal bone, Occipital bone.